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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,672	03/22/2005	Hubert Kargl	1716448	3939
24240	7590	02/06/2006	EXAMINER	
CHAPMAN AND CUTLER 111 WEST MONROE STREET CHICAGO, IL 60603			KRECK, JOHN J	
			ART UNIT	PAPER NUMBER
			3673	

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/528,672	<b>Applicant(s)</b> KARGL ET AL.	
	<b>Examiner</b> John Kreck	<b>Art Unit</b> 3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                                    |

### DETAILED ACTION

The preliminary amendment has been entered.

Claims 1-20 are pending.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Note: claim 1 recites elements of the cutting machine (e.g. arm, drum, etc.) within the preamble. Claim 1 has been interpreted as if it requires the combination of the nozzles and cutting machine.

3. Claims 1, 2, 7-10, 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE19951848A1 in view of Shope, et al. (U.S. Patent number 4,676,557).

DE19951848 teaches a device for producing a gas liquid mixture in the vicinity of cutting tools arranged on a cutter head or cutter drum mounted on a cutter arm of a cutter machine. DE19951848 also teaches the nozzle pair with the axes oriented in a manner so that the jets impinge. DE19951848 fails to teach the axes of the nozzles form an angle between 45° and 135°.

Shope teaches a similar nozzle pair (see column 7, lines 40-50) in which the axes are arranged at an angle of 45°. Note that Shope discloses the air nozzle axis is

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horizontal, and the water nozzle at an angle greater than 45° to the horizontal; thus implicitly teaching a range of 45°-90°, although 45° is the only angle explicitly disclosed. Shope teaches that such an angle provides an effective mist for cooling and confining dust.

In light of the teaching in Shope, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the nozzles of DE19951848 to have the axes form an angle of between 45° and 135° as called for in claim 1.

With regards to claim 2: Shope is silent regarding the distance; however one of ordinary skill in the art would have known that distances of 100mm or less would be within the appropriate range for experimentation; thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a distance of less than 100mm as called for in claim 2.

With regards to claim 7: Shope is silent regarding the pressure; however one of ordinary skill in the art would have known that nozzles with operating pressures in the range of 0.6 to 1.5 bar or 4 to 5 bar would be within the appropriate range for experimentation; thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have used such nozzles as called for in claim 7.

With regards to claim 8: DE19951848 and Shope teach the axes are arranged to the cutting tools.

With regards to claim 9: DE19951848 teaches the nozzle assembly.

With regards to claim 10: DE19951848 teaches the nozzles at 140mm.

With regards to claim 12: DE19951848 teaches the chisels.

With regards to claim 13: Shope implicitly teaches a range of 45°-90°; thus one of ordinary skill in the art would have found an angle of 75°-85° to be obvious. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed.Cir. 1990).

With regards to claim 14: Shope is silent regarding the distance; however one of ordinary skill in the art would have known that distances of 50mm or less would be within the appropriate range for experimentation; thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a distance of less than 50mm as called for in claim 14.

With regards to claim 15: Shope is silent regarding the distance; however one of ordinary skill in the art would have known that distances of 8mm or less would be within the appropriate range for experimentation; thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a distance of less than 8mm as called for in claim 15.

4. Claims 3-6, 16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE19951848 and Shope as applied to claim 1 above, and further in view of Slowik, et al. (U.S. Patent number 6,517,012) [or alternatively, its German language equivalent, published 23 September 1999]

DE19951848 and Shope each fail to explicitly disclose the outlet angles, opening diameters, and whirl chambers.

Slowik teaches that outlet angles and opening diameters are largely matters of engineering design; and also teaches the advantages of swirl chambers. Since DE19951848 and Shope are entirely silent regarding outlet angles and diameters; one of ordinary skill in the art would have found the claimed diameters and angles obvious matters of engineering design. With specific regards to the swirl chamber, one of ordinary skill in the art would have found the swirl chamber obvious, in order to improve the spray of the fluids.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE19951848 and Shope as applied to claim 1 above, and further in view of Lobbe, et al. (U.S. Patent number 4,243,268).

DE19951848 and Shope each fail to explicitly disclose the pivoting nozzles. Lobbe teaches the desirability of pivotable nozzles, thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the DE1951848 device to have pivoting nozzles as called for in claim 11.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kreck whose telephone number is 571-272-7042. The examiner can normally be reached on Mon-Thurs 530am-2pm; Fri: telework.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on 571-272-7049. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John Kreck  
Primary Examiner  
Art Unit 3673

1 February 2006